IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A multifunctional illumination device, in particular for use in a motor vehicle,

~~**characterized in that**~~ wherein

the luminous means of the illumination device are formed by an arrangement of a multiplicity of semiconductor light sources (2) grouped to form an array, ~~and~~

~~in that~~ sensor elements (3) are arranged instead of the semiconductor light sources (2) at individual positions of this array,

at least one semiconductor light source (2) and at least one sensor (3) are selected from the multiplicity of semiconductor light sources (2) and sensor elements (3) and are assigned to a common optical system (1),

the assignment with reference to the optical system (1) is performed in such a way that the optical system (1) acts on the semiconductor light source (2) and sensor (3) such that these have different emission and/or reception characteristics, and

perpendicular to the light entry surface the individual optical systems (1) have a central region whose projection into a two-dimensional plane corresponds to a cylindrical 2-dimensional Cartesian oval.

2. (currently amended) The multifunctional illumination device as claimed in claim 1,
~~characterized in that~~ wherein the semiconductor light sources (2) emit light in different wavelength regions~~, in particular both in the visible wavelength region and in the infrared wavelength region~~.

3. (currently amended) The multifunctional illumination device as claimed in claim 1 ~~one of the preceding claims~~,
~~characterized in that~~ wherein optical systems (1) assigned to the individual semiconductor light sources (2) are designed as flat elements whose light entry opening have an elongated, substantially rectangular shape.

4. (currently amended) The multifunctional illumination device as claimed in claim 3,
~~characterized in that~~ wherein
~~perpendicular to the light entry surface the individual optical systems have a central region whose projection into a two-dimensional plane corresponds to a cylindrical 2-dimensional Cartesian oval, and in that this central region is combined with a parabolic reflector~~
the central region of the optical systems (1) is combined with a parabolic reflector.

5. (canceled)

6. (currently amended) The multifunctional illumination device as claimed in claim 1 ~~one of the preceding claims~~, ~~characterized in that~~ wherein

the illumination device comprises a means enabling the individual semiconductor light sources (2) and the sensor elements (3) to be switched individually or in groups.

7. (currently amended) The multifunctional illumination device as claimed in claim 1 ~~one of the preceding claims~~, ~~characterized in that~~ wherein

the specific sensor elements (3) are assigned to specific semiconductor light sources (2), and ~~in that~~

a means is provided for operating the sensor elements (3) in a fashion synchronized with the semiconductor light sources (2) assigned to them.

8. (currently amended) The multifunctional illumination device as claimed in claim 1 ~~one of the preceding claims~~, ~~characterized in that~~ wherein the sensor elements (3) are photodiodes.

9. (currently amended) The multifunctional illumination device as claimed in claim 1 ~~one of the preceding claims~~, ~~characterized in that~~ wherein the sensor elements (3) are antennas.

10. (currently amended) The multifunctional illumination device

as claimed in claim 9,

~~characterized in that~~ wherein

the antennas (3) are connected to a transceiver unit.

11. (currently amended) A method for operating a multifunctional illumination device wherein the luminous means of the illumination device are formed by an arrangement of a multiplicity of semiconductor light sources grouped to form an array, sensor elements are arranged instead of the semiconductor light sources at individual positions of this array, at least one semiconductor light source (2) and at least one sensor (3) are selected from the multiplicity of semiconductor light sources (2) and sensor elements (3) and are assigned to a common optical system (1), the assignment with reference to the optical system (1) is performed in such a way that the optical system (1) acts on the semiconductor light source (2) and sensor (3) such that these have different emission and/or reception characteristics, and perpendicular to the light entry surface the individual optical systems (1) have a central region whose projection into a two-dimensional plane corresponds to a cylindrical 2-dimensional Cartesian oval, ~~characterized in that~~ the method comprising:

driving the sensor elements (3) and semiconductor light sources (2) ~~are driven~~ independently individually or in groups.

12. (currently amended) The method as claimed in claim 11, ~~characterized in that~~ wherein

individual sensor elements (3) are operated synchronously with semiconductor light sources (3) assigned to them.

13. (currently amended) The method as in claim 11, wherein said ~~Use of a~~ multifunctional illumination device ~~as claimed in one of the preceding claims~~ is operated for the purpose of measuring distances and/or determining visibility.

14. (currently amended) The method as in claim 11, wherein said ~~Use of a~~ multifunctional illumination device ~~as claimed in one of the preceding claims~~ is operated for the purpose of measuring the ambient light.

15. (currently amended) The method as in claim 11, wherein said ~~Use of a~~ multifunctional illumination device ~~as claimed in one of the preceding claims~~ is operated in a system for improving night vision that operates on the basis of active infrared or ultraviolet ambient illumination.

16. (currently amended) The method as in claim 11, wherein said ~~Use of a~~ multifunctional illumination device ~~as claimed in one of the preceding claims~~ is operated as a vehicle-to-vehicle communication system in a motor vehicle.

17. (currently amended) The method as in claim 11, wherein said ~~Use of a~~ multifunctional illumination device ~~as claimed in one of the preceding claims~~ is operated for the purpose of detecting objects in the surroundings of the device using the radar principle.

18. (new) The multifunctional illumination device as claimed in claim 2, wherein the semiconductor light sources (2) emit light in both the visible wavelength region and the infrared wavelength region.